Automatic Identification of Molecules in a Thin-Film Extract Combined with Laser

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Résumé en anglais	This paper presents the automation of the thin-layer chromatography technique whose separation and identification of molecules present in a mixture are currently done manually and laboriously. We have therefore found an interest in automating this technique. In this part, the method implemented comprises 2 steps. First we proceeded to the segmentation of the spots obtained on the chromatographic plate. We then developed a program to identify families of molecules such as coumarins, terpenes, tannins, flavonoids, polyphenols, etc. by calculating segmentation parameters such as standard deviation, entropy, mean pixel intensity and frontal ratio from an algorithm on the matlab software. Finally our results have been compared to the results obtained by the traditional identification technique in laboratories. Some similarity between the two results obtained shows the reliability and the robustness of our technique.
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